Audio Distribution Network

ADN CU1

Quick guide

SENNHEISER

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Information on this quick guide

Please make sure to read the "Safety information" supplement included separately with the product. This supplement contains important information on the safe operation of the product as well as the manufacturer's declaration and warranty notes.

A detailed instruction manual for the overall ADN conference system can be found

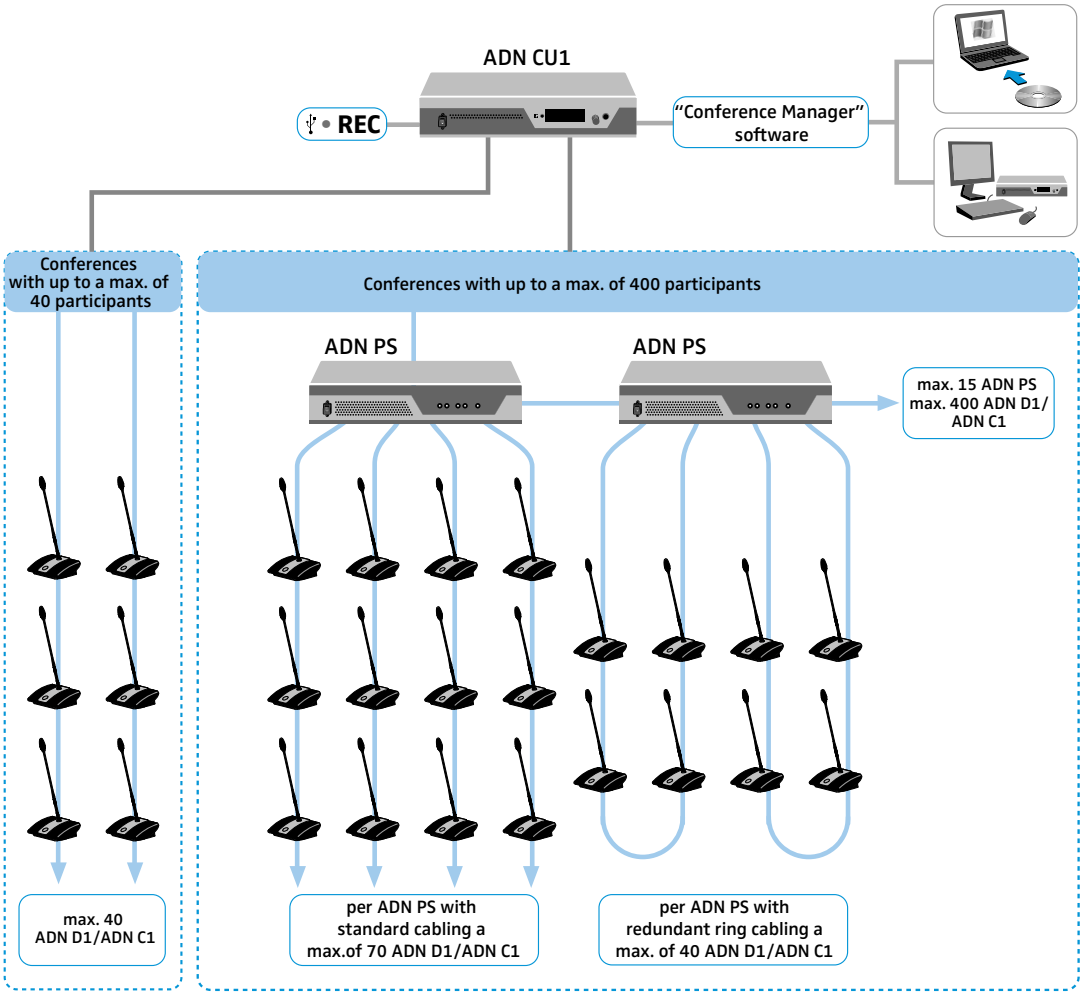
- on the Internet at www.sennheiser.com or
- on the DVD-ROM supplied with the ADN CU1 central unit.

The ADN CU1 central unit

The ADN CU1 central unit is part of the Sennheiser ADN conference system.

The central unit controls the operation of the entire conference system. Up to max. 40 ADN D1 delegate units and ADN C1 chairperson units can be directly connected to the central unit. For larger conference systems with up to max. 400 conference units, the central unit can also manage up to 15 ADN PS power supplies.

For configuring the conference system, you can either use the central unit's operating menu or the "Conference Manager" software.



Delivery includes

1 ADN CU1 central unit
1 mains cable (EU, UK or US version), length 1.8 m
1 quick guide
1 "Safety information" supplement
1 including, among other things, the "Conference Manager" software, the "ADN Cable Calculator" software and the instruction manual for the overall conference system as PDF

Components required for operation

Central unit/ Power supplies

Number	Description	Cat. No.	Function
1	ADN CU1-EU central unit, EU version	505553	Controls the conference and supplies power to max. of 40 conference units
	ADN CU1-UK central unit, UK version	505554	
	ADN CU1-US central unit, US version	505555	
1 – 15 (optional)	ADN PS-EU power supply, EU version	505546	Supplies power to conference units connected in simple strings or in redundant ring topology, for conferences with up to 400 conference units
	ADN PS-UK power supply, UK version	505547	
	ADN PS-US power supply, US version	505548	

Conference units

Number	Description	Cat. No.	Function
Max. 400	ADN D1 delegate unit	502758	Allows to make contributions to the conference
1 – 10 (optional)	ADN C1 chairperson unit	502759	Allows to manage the conference

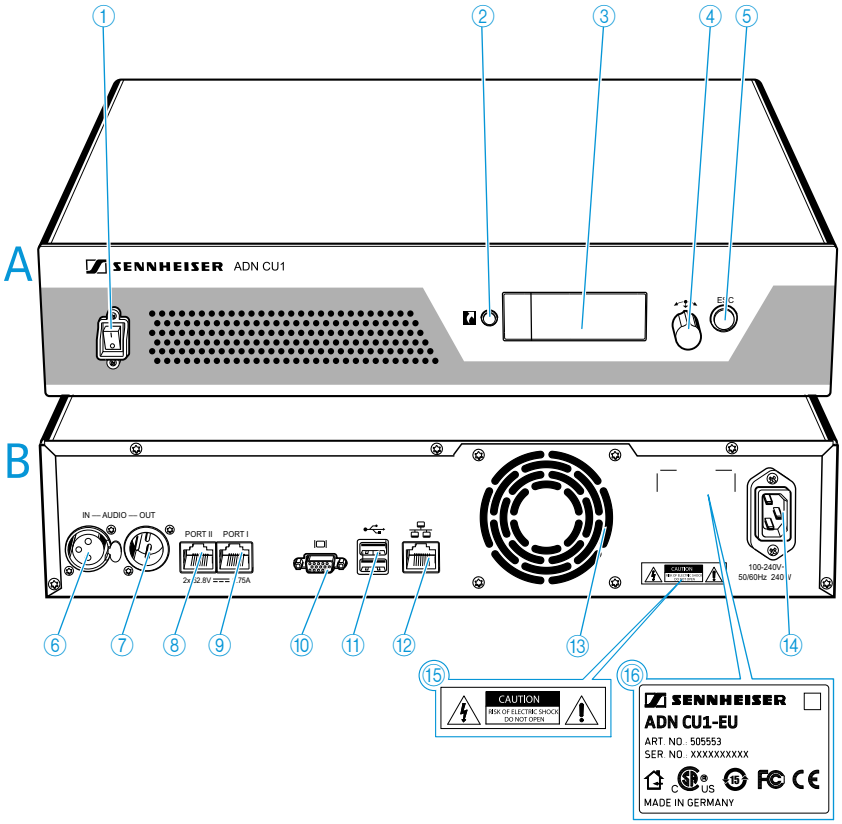
System cables

The system cables are black and have two shielded RJ45 modular plugs.

Number	Description, length	Cat. No.	Function
Divers	SDC CBL RJ45-2, 2 m	009842	Allow to interconnect components and conference units
	SDC CBL RJ45-3, 3 m	009843	
	SDC CBL RJ45-5, 5 m	009844	
	SDC CBL RJ45-10, 10 m	009845	
	SDC CBL RJ45-20, 20 m	009846	
	SDC CBL RJ45-50, 50 m	009847	

Additional accessories for the ADN conference system can be found at www.sennheiser.com.

Product overview
ADN CU1 central unit



A Front view

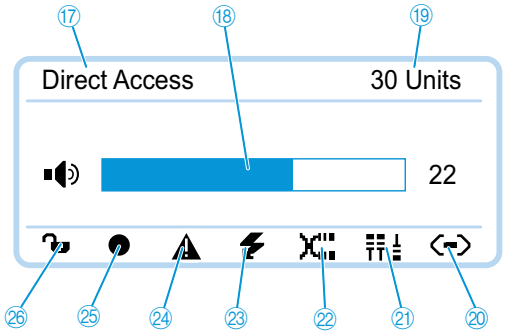
① On/off switch
② Standard display key
③ Display panel
④ Jog dial
⑤ ESC key (Escape)

B Rear view

⑥ IN audio input
⑦ OUT audio output
⑧ PORT II socket (RJ 45) for connection of conference units
⑨ PORT I socket (RJ 45) for connection of conference units
⑩ VGA monitor output
⑪ USB socket (2x)
⑫ Network socket (RJ 45)
⑬ Fans
⑭ Mains socket
⑮ Hazard warnings
⑯ Type plate

Overview of the ADN CU1 display panel

After switch-on, the central unit's display shows progress bars (for the booting routine "Booting" and the self test "Selftest") and then the standard display:



Text/icon	Possible display/function
⑰ Conference mode	Current conference mode: "Direct Access", "Override", "Push To Talk", "Request"
⑱ Floor channel volume	Current volume setting for the conference units' built-in loudspeakers
⑲ Number of conference units	Number of conference units connected to the conference system
⑳ Connection status	The central unit is not connected to the "Conference Manager" software and/or a media control unit.
	The central unit is connected to the "Conference Manager" software and/or a media control unit.
㉑ Structural change icon	Icon appears when, since the last initialization, a malfunction/change has occurred in the cabling of the conference units.
㉒ Cable fault icon	Icon appears when a conference unit is not correctly connected to the ADN CU1 central unit.
㉓ Short-circuit icon	Icon appears when there is a short circuit in the cabling of the conference units. The display panel lights up red.
㉔ Warning triangle	Icon appears when there is a malfunction/change. The display panel lights up red or orange.
㉕ Audio recording	Icon appears when audio recording of the conference is activated.
	Icon flashes when storage space is low.
	Icon appears when, after finishing the audio recording, data is still written to the mass storage device.
	Icon appears when the audio recording failed. The display panel lights up red.
㉖ Lock mode icon (see page 14)	Lock mode of the central unit is deactivated
	Lock mode of the central unit is activated

For information on troubleshooting when error icons ㉑ to ㉔ are displayed, refer to the detailed instruction manual "ADN Conference System".

Structuring and controlling the conference system

Structuring the conference system

The ADN conference system is suitable for conferences with up to 400 conference units. For safe operation of the conference system, make sure that all conference units are supplied with a voltage of at least 35 V! The voltage supplied depends on the number of connected conference units and on the cable lengths. The standard cable length between the central unit or power supply and the first conference unit is 80 m max. and the standard cable length between the individual conference units is 2 to 5 m.

If these cable lengths are observed, safe operation of conference systems with the following number of conference units is ensured:

- small conference systems comprising only an ADN CU1 central unit
  - 30-40 conference units connected in simple strings
- large conference systems comprising an ADN CU1 central unit and a max. of 15 ADN PS power supplies
  - max. 400 conference units connected in simple strings or in ring topology

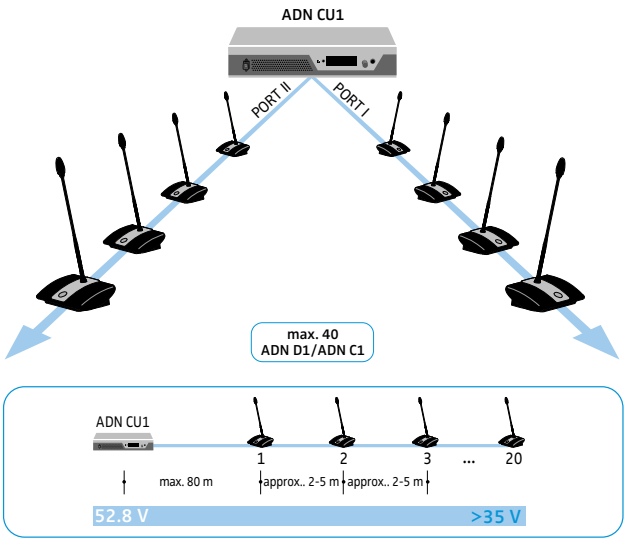
  per ADN PS power supply
  - 60-70 conference units connected in simple strings
  - 30-40 conference units connected in ring topology

If cable lengths are shorter, it might be that more conference units can be used.

ADN D1 delegate units and ADN C1 chairperson units can be combined in an arbitrary order. The number of chairperson units, however, is limited to 10 max. per conference system. All components of the conference system are interconnected using SDC CBL RJ-45 system cables.

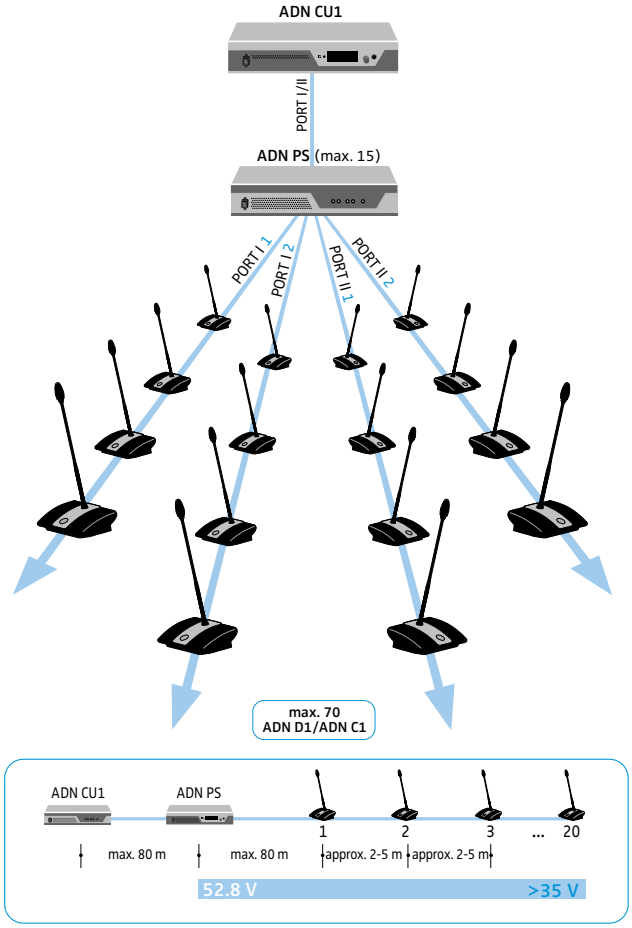
Small conference system with simple cabling

For small conference systems with approx. 30-40 conference units, you require one ADN CU1 central unit for controlling the conference. The conference units are interconnected in two cable strings which are directly connected to the central unit.



Large conference system with simple cabling

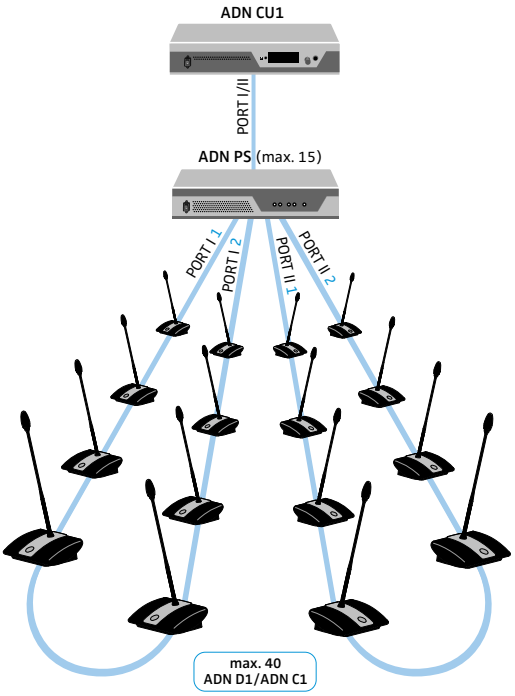
For setting up a large conference system with the maximum number of conference units (i.e. up to 400), you require one ADN CU1 central unit for controlling the conference and additional ADN PS power supplies for powering the conference units. The conference units are interconnected in cable strings and up to four cable strings can be connected to each ADN PS power supply.

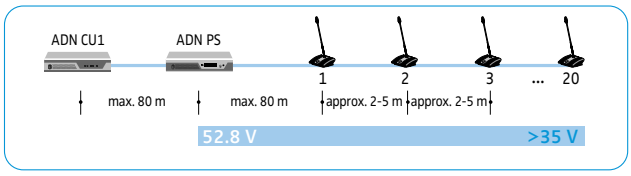


Large conference system with redundant ring topology

The redundant ring topology ensures that, should one conference unit or system cable fail or be manipulated, all other conference units of the cable ring will continue to function reliably.

For setting up a large conference system with redundant ring topology, you require one ADN CU1 central unit for controlling the conference and additional ADN PS power supplies for powering the conference units. The conference units are interconnected in rings and two rings can be connected to each ADN PS power supply.



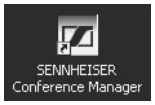


Calculating the voltage supply of the conference units

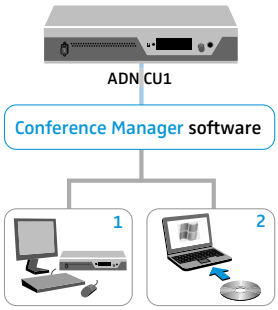
The "ADN Cable Calculator" software allows you to calculate the voltage supply on the individual sections of a cable string or cable ring and to plan the structure of the conference system. The software is available from your Sennheiser partner or from the "Product Downloads" area on the product page at www.sennheiser.com.

For further information on the installation and use of the "ADN Cable Calculator" software, refer to the help section of the "ADN Cable Calculator" software and to the detailed instruction manual "ADN Conference System".

Configuring and controlling the conference system



For configuring the conference system, you can either use the operating menu of the central unit or the "Conference Manager" software. The software also allows you to control conferences via a graphical interface.



The "Conference Manager" software can be run in two different ways:

1. As a program on the central unit's built-in PC.
   You have to connect a screen, keyboard, and mouse to the central unit (see page 13).
2. As a program on a Windows PC.
   You have to install the "Conference Manager" software on the PC and integrate the PC together with the central unit in a network (see page 13).

Input and output of audio signals

Via XLR sockets, you can feed audio signals to the floor channel or output the floor channel.

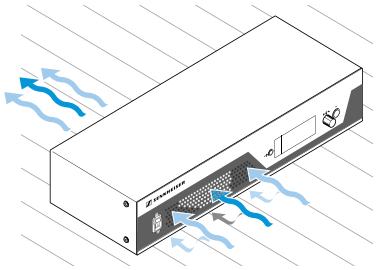
For recording a conference on a USB mass storage device, you can use the recording function of the ADN CU1 central unit, which saves the floor channel and all channels of the conference units as audio files in wav format.

Integration into a media control system

The ADN conference system can be completely integrated into a media control system. You can monitor and control all functions of the conference system via the programmable commands of your media control system. For information on the integration into a media control system, refer to the detailed instruction manual "ADN Conference System").

Preparing the ADN CU1 central unit for use

Setting up the central unit on a flat surface



- Make sure that the air vents are not covered or blocked.
- Place the central unit on a flat surface as shown.

For information on how to mount the central unit into a 19" rack, refer to the detailed instruction manual "ADN Conference System".

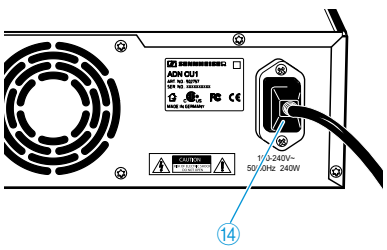
Connecting the central unit to the mains

CAUTION

Product damage due to unsuitable mains cables or power outlets!

An unsuitable power supply can damage the product.

- Only use the mains cable (supplied) for connecting the product to the mains.
- Only use multi-outlet power strips or extension cables with protective ground contacts.
- Only use mains cables with a 3-pin connector.



- First connect the mains cable (supplied) to the mains socket ⑭.
- Connect the mains cable to the mains power supply.
  The ADN CU1 central unit is now ready for operation.

Setting up the conference system

CAUTION

Product damage due to an unsuitable power supply!

If you connect standard network devices with RJ 45 plugs (e.g. switches or network cards) to the connection sockets PORT I and PORT II, the network devices can be damaged due to an unsuitable power supply.

- Only connect ADN C1 and ADN D1 conference units to the connection sockets PORT I and PORT II.

Basic information on the set-up of the conference system

Regardless of the number of conference units and the room size, we recommend the following procedure for setting up the conference system:

- Plan the number of conference units required for your conference system. A total of 400 conference units can be used in a conference system (the number of ADN C1 chairperson units is limited to 10 max.). Always take the largest possible number of participants as a starting point.
- Plan if simple cabling is sufficient or if you require a redundant ring topology (see page 6).
- If necessary, calculate the number of ADN PS power supplies required (a max. of 15 ADN PS power supplies can be used in a conference system).
- If necessary, calculate the maximum length of the cabling in order to ensure that all conference units connected are supplied with sufficient voltage (see page 8).
- Place the ADN CU1 central unit and, if necessary, the ADN PS power supplies in the electrical equipment room.
- Place the conference units at the corresponding seats.
- Put out a sufficient number of SDC CBL RJ45 system cables in the required lengths.

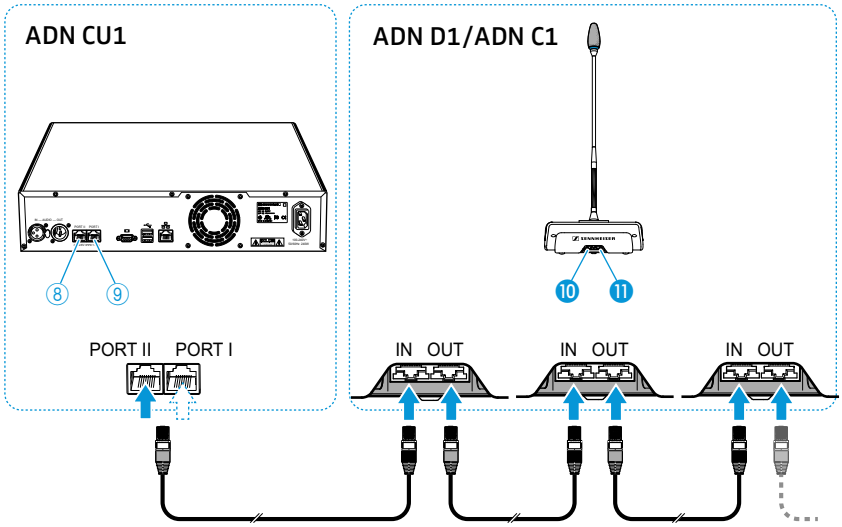
Setting up a small conference system with only the central unit

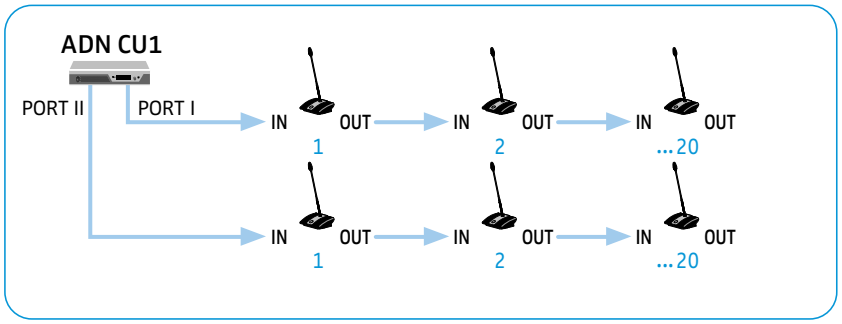
For a small conference system, you do not require ADN PS power supplies.

Connecting conference units connected in a cable string to the ADN CU1 central unit

The following describes how to connect one cable string to the ADN CU1 central unit. If necessary, repeat these steps for a second cable string.

- Use a system cable to connect the PORT II socket ⑧ or PORT I socket ⑨ of the ADN CU1 central unit to the IN socket ⑩ of the first conference unit.
- Use a system cable to connect the OUT socket ⑪ of the first conference unit to the IN socket ⑩ of the second conference unit.
- Repeat these steps for additional conference units.
- If necessary, repeat all steps for a second cable string.





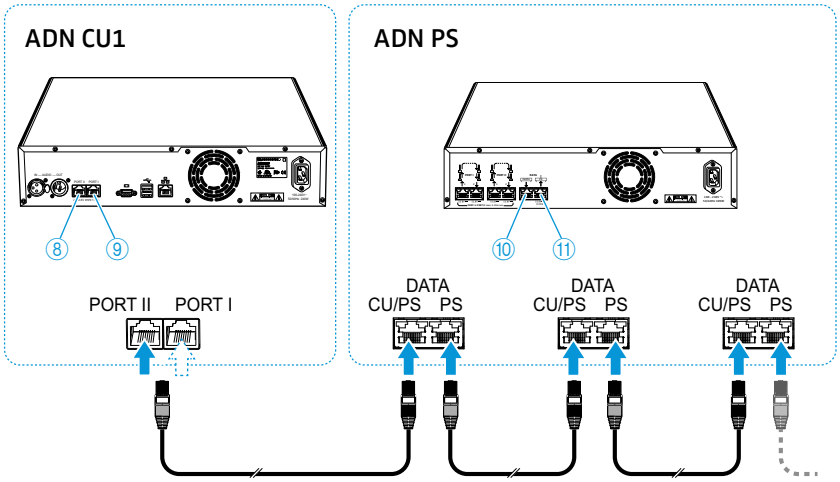
Please note that there is a limited number of approx. 15-20 conference units per cable string due to the voltage drop on the cable string (see page 6).

You can use optional cable holders for guiding the system cables. For further information, refer to the detailed instruction manual "ADN Conference System".

Connecting ADN PS power supplies to the ADN CU1 central unit

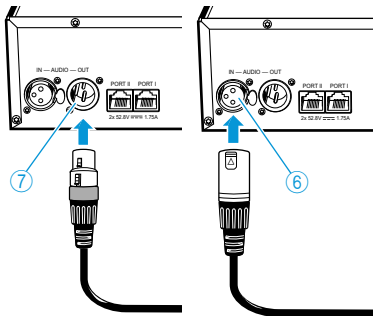
For conference systems comprising more than 40 conference units or when the conference units are connected in a redundant ring topology, you require ADN PS power supplies. A max. of 15 ADN PS power supplies can be used in a conference system.

- Use a system cable to connect the PORT II socket ⑧ or PORT I socket ⑨ of the ADN CU1 central unit to the DATA CU/PS input socket ⑩ of the first ADN PS power supply (shorter cables increase the operational reliability, the maximum length allowed is 80 m).
- Use a system cable to connect the DATA PS output socket ⑪ of the first ADN PS power supply to the DATA CU/PS input socket ⑩ of the second ADN PS power supply.
- Repeat these steps for the remaining ADN PS power supplies.



- Connect the conference units to the ADN PS power supply (refer to the quick guide of the ADN PS power supply or to the detailed instruction manual "ADN Conference System").

Connecting external audio devices to the central unit



To output the floor channel via an external audio device:

- Use an XLR cable to connect the OUT audio output ⑦ of the central unit to an external audio device.

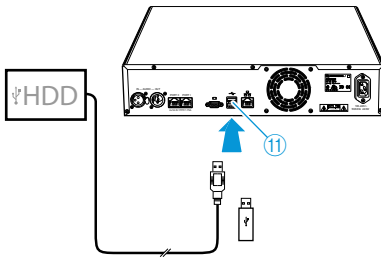
To connect an external audio source and to feed its signals to the floor channel:

- Use an XLR cable to connect the external audio source to the IN audio input ⑥ of the central unit.

Connecting a USB mass storage device for audio recordings to the central unit

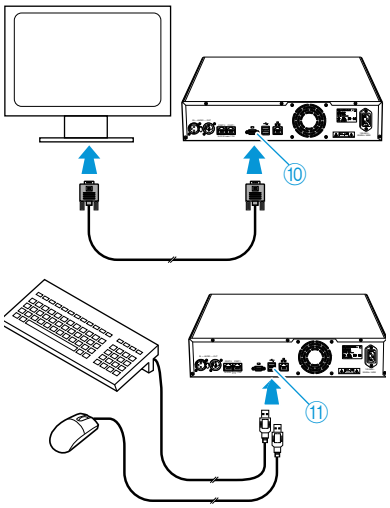
In order to be able to use the audio recording function of the ADN CU1 central unit, you require a USB mass storage device with the following characteristics:

USB mass storage device	Requirements
Recommended memory size	> 500 GB
File system	NTFS, FAT32
Partition	1
Connection	USB type A plug
Interface	USB 2.0
Power supply	via USB socket (approx. 500 mA) or separate mains unit



- Connect the USB mass storage device to one of the two USB sockets ⑪.
- If necessary, connect the mains unit of the USB mass storage device.

Running the software installed on the central unit



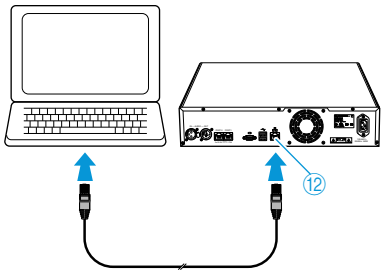
Preparing to use the "Conference Manager" software

To use the "Conference Manager" software installed on the central unit, you require the following devices:

Device	Requirements
Screen	Connection: 15-pin Sub-D VGA Resolution: 800 x 600 pixels or higher 1024 x 768 or 1280 x 1024 pixels recommended
Mouse	Standard USB for Windows PCs
Keyboard	Standard USB for Windows PCs Supported language layouts: e.g. English, German, French, Spanish, Italian, Dutch, Russian, Chinese, Japanese (for the complete list, refer to the detailed instruction manual "ADN Conference System")

- Use a Sub-D VGA cable to connect a screen to the VGA monitor output ⑩.
- Connect the keyboard and the mouse to the two USB sockets ⑪.
- Configure the screen, the keyboard and the mouse using the "Conference Manager" software (refer to the detailed instruction manual "ADN Conference System").
  Your conference system is now ready for operation.

Running the software on a separate Windows PC

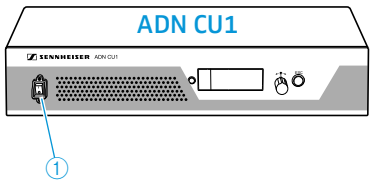


To run the "Conference Manager" software on a separate Windows PC, the PC must meet the following system requirements:

Component	Requirement
Processor	Intel Pentium 4 or AMD Athlon XP, 2 GHz or more
RAM	Min. 1 GB, depending on your operating system
Hard disk	Min. 150 MB free hard disk memory
Drives	DVD-ROM
Interfaces/network	Ethernet 100 MBit/s
TCP/IP internet protocol	Internet Protocol version 4 (IPv4)
Screen	Minimum resolution: 800 x 600 pixels Recommended: 1024 x 768 pixels
Operating system	Microsoft Windows XP Professional with SP 3 Microsoft Windows Vista with SP 2 Microsoft Windows 7

- Use a network cable (Cat5) to connect the Ethernet socket ⑫ of the central unit to the network interface of your PC.
  You can also connect the PC and the central unit using a switch or similar.
- Install the "Conference Manager" software supplied on the DVD-ROM on your connected PC and configure the network (for further information on the software, refer to the detailed instruction manual "ADN Conference System").

Using the ADN CU1 central unit



Switching the conference system on/off

To switch the conference system on:

- On the ADN CU1 central unit and the ADN PS power supplies, set the on/off switch ① to position "I".
  The central unit switches on and its display panel lights up. The power supplies switch on and their status LEDs light up.

To switch the conference system off:

- Set the on/off switch ① of the ADN CU1 central unit to position "0".
  The central unit is switched off and the display panel goes off. All ADN PS power supplies connected to the central unit and switched on are switched off and the status LEDs go off.

To completely switch the ADN CU1 central unit or the ADN PS power supply off:

- Disconnect the mains connector of the ADN CU1 central unit or the mains connector of the ADN PS power supply from the mains power supply.

Deactivating the lock mode of the central unit

If the lock mode is activated (see page 19), you have to deactivate it in order to be able to operate the central unit:

- Press the jog dial or any other key.
  "Lock" appears on the display panel.

- Turn the jog dial.
  The "OFF" setting is selected.

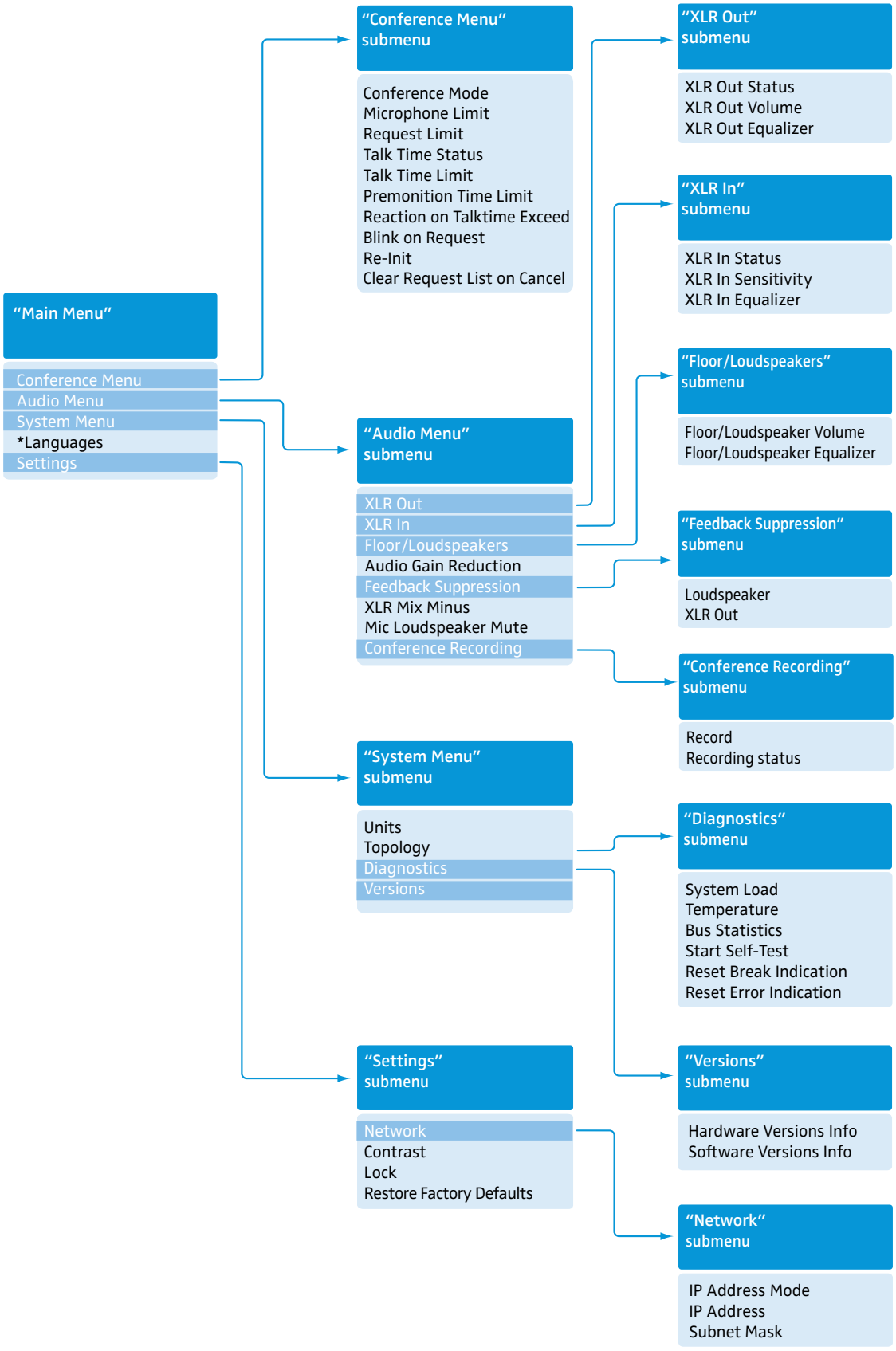
- Press the jog dial.
  The lock mode is deactivated.

Functions of the keys

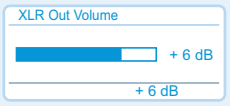
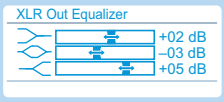
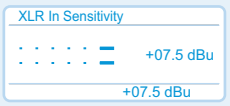
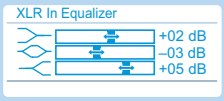
Action	Functions
Press the ESC key	• Cancels the entry and returns to the next higher menu level or to the standard display
Press the jog dial	• Changes from the standard display to the operating menu • Calls up a menu item • Enters a submenu • Stores the settings and returns to the operating menu
Turn the jog dial	• Increases or reduces the floor channel volume (when the standard display is shown) • Changes to the next/previous menu item • Changes the setting of a menu item
Press the standard display key	• Returns to the standard display

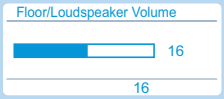
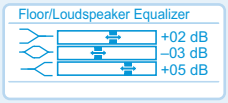
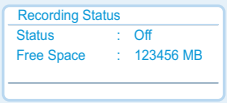
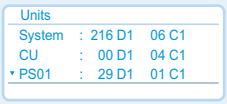
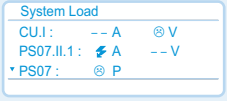
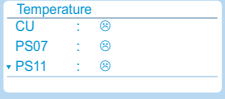
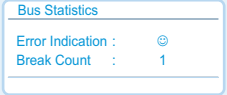
Configuring the conference system

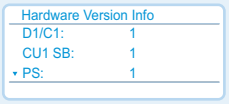
Overview of the operating menu



Display	Function of the menu item	Option/display
"Main Menu"		
"Conference Menu"	Calls up the "Conference Menu" submenu	–
"Audio Menu"	Calls up the "Audio Menu" submenu	–
"System Menu"	Calls up the "System Menu" submenu	–
"*Languages"	Adjusts the language	"Deutsch", "English", "Espanol"...
"Settings"	Calls up the "Settings" submenu	–
"Conference Menu"		
"Conference Mode"	Adjusts the conference mode "Direct Access", "Override" and "Push To Talk": These conference modes do not require the use of a chairperson unit. If the maximum number of speakers who can take the floor simultaneously has not been reached, a further speaker can take the floor immediately. "Request": For this mode to function, a chairman unit is required. The chairperson receives requests to speak and grants speaking privileges according to the FIFO principle (First in – First out), i.e. the participant with the longest waiting time is granted speaking privileges.	"Direct Access", "Override", "Push To Talk" or "Request"
"Microphone Limit"	Sets the maximum number of speakers who can take the floor simultaneously for all conference modes	"1" ... "10"
"Request Limit"	Sets the maximum number of requests to speak for "Request" and "Direct Access" mode	"0" ... "10"
"Talk Time Status"	Activates/deactivates the speaking time limit	"On"/"Off"
"Talk Time Limit"	Sets the speaking time limit	"01" ... "60" in steps of 1 minute
"Premonition Time Limit"	Sets the advance warning time (warns speakers that they are approaching the end of the individual speaking time)	"00" ... "120" in steps of 10 seconds
"Reaction on Talktime Exceed"	Determines the behavior when the individual speaking time is exceeded "Continue": The individual speaking time is continued. "Cancel": The individual speaking time is terminated.	"Continue"/"Cancel"
"Blink on Request"	Activates/deactivates the flashing of the signal light ring when a request to speak is made	"On"/"Off"
"Re-Init"	Re-initializes the conference units If you connect ADN C1 chairperson units to the conference system during a running conference, you have to re-initialize them. When conference units are re-initialized, the conference will be interrupted.	"Yes"/"No"
"Clear Request List on Cancel"	Sets the function of the priority key of the chairperson unit "On": Pressing the priority key deactivates all ADN D1 delegate units. All requests to speak are deleted. "Off": Pressing the priority key deactivates all currently active ADN D1delegate units. All requests to speak are retained.	"On"/"Off"

Display	Function of the menu item	Option/display
"Audio Menu"		
"XLR Out"	Calls up the "XLR Out" submenu	–
"XLR In"	Calls up the "XLR In" submenu	–
"Floor/Loudspeakers"	Calls up the "Floor/Loudspeakers" submenu	–
"Audio Gain Reduction"	The sum signal of all active conference units is output via the floor channel ("Floor/Loudspeakers"). The "Audio Gain Reduction" menu item allows you to adjust how the volume levels of the signals of the individual conference units are processed.	"0.0 dB per Mic" ... "–3.0 dB per Mic", "Linear Division"
"Feedback Suppression"	Calls up the "Feedback Suppression" submenu	–
"XLR Mix Minus"	Activates the filtering of the IN audio input from the OUT audio output in order to avoid, for example, double audio signals during teleconferencing	"On"/"Off"
"Mic Loudspeaker Mute"	Deactivates the conference units' built-in loudspeakers for contributions coming from the conference units' microphones	"On"/"Off"
"Conference Recording"	Calls up the "Conference Recording" submenu	–
"XLR Out" menu		
"XLR Out Status"	Activates/deactivates the OUT audio output	"On"/"Off"
"XLR Out Volume"	Adjusts the volume of the XLR output	 "01" ... "32"
"XLR Out Equalizer"	Adjusts the tone color of the XLR output	 "–12 dB" ... "+12 dB"
"XLR In" menu		
"XLR In Status"	Activates/deactivates the IN audio input	"On"/"Off"
"XLR In Sensitivity"	Adjusts the sensitivity of the XLR input	 "–18.0 dBu" ... "+18.0 dBu"
"XLR In Equalizer"	Adjusts the tone color of the XLR input	 "–12 dB" ... "+12 dB"

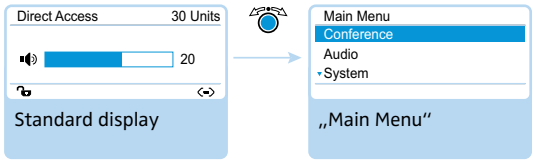
Display	Function of the menu item	Option/display
"Floor/Loudspeakers" menu		
"Floor/Loudspeakers Volume"	Adjusts the floor channel volume ("Floor/Loudspeakers")	 "00" ... "32"
"Floor/Loudspeakers Equalizer"	Adjusts the tone color of the floor channel	 "–12 dB" ... "+12 dB"
"Feedback Suppression" menu		
"Loudspeaker"	Changes the volume adjustment of the conference units' built-in loudspeakers in order to increase the max. possible volume while the risk of feedback due to the increased volume is reduced.	"Off" low (approx. +2 to +3 dB) "Low Intensity" high (approx. +5 to +6 dB) "High Intensity"
"XLR Out"	Changes the volume adjustment of the OUT audio output in order to increase the max. possible volume while the risk of feedback due to the increased volume is reduced.	
"Conference Recording" menu		
"Record"	Starts/stops the audio recording of the conference channels on a USB mass storage device	"On"/"Off"
"Recording status"	Provides information on the status of the audio recording and on the available memory space on the USB mass storage device	
"System Menu"		
"Units"	Displays the type and number of the conference units connected to the connections PORT of the ADN CU1 central unit or ADN PS power supplies	
"Topology"	Displays the type of topology connected to the ADN PS power supplies (simple cabling or redundant ring topology)	
"Diagnostics"	Calls up the "Diagnostics" submenu	–
"Versions"	Calls up the "Versions" submenu	–
"Diagnostics" menu		
"System Load"	Provides information on the current supply (A), voltage supply (V) and power (P)	
"Temperature"	Provides information on the temperature status	
"Bus Statistics"	Provides information on the status of data transmission/ errors	

Display	Function of the menu item	Option/display
"Start Self-Test"	Performs a self-test on the conference system	"Yes"/"No"
"Reset Break Indication"	Resets the error counter ("Break Count") in the "Bus Statistic" menu item	"Yes"/"No"
"Reset Error Indication"	Resets the display for data bus errors ("Error Indication") in the "Bus Statistic" menu item	"Yes"/"No"
"Versions" menu		
"Hardware Version Info"	Displays the hardware version	
"Software Version Info"	Displays the software version	
"Settings" menu		
"Network"	Calls up the "Network" submenu	–
"Contrast"	Adjusts the contrast of the display panel	"1" ... "15"
"Lock"	Activates/deactivates the lock mode	"On"/"Off"
"Restore Factory Defaults"	Restores the factory default settings	"Yes"/"No"
"Network" menu		
"IP Address Mode"	Sets the IP address allocation mode	"Static IP"/"Dynamic IP"
"IP Address"	Sets the IP address of the central unit	"xxx . xxx . xxx . xxx"
"Subnet Mask"	Sets the subnet mask of the central unit	"xxx . xxx . xxx . xxx"

Working with the operating menu

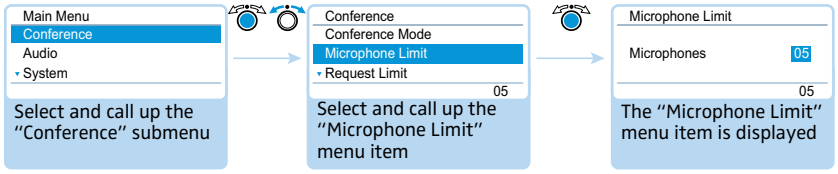
By way of example of the "Microphone Limit" menu item, this section describes how to use the operating menu.

Changing from the standard display to the operating menu



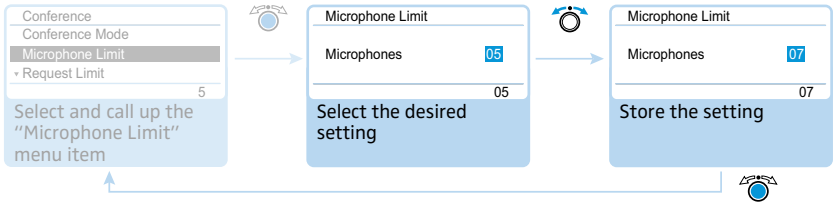
▶ Press the jog dial.
The standard display is replaced by the "Main Menu". The last called-up menu item is highlighted.

Calling up a menu item



- Press the jog dial to call up the "Conference" menu item.
  The "Conference" submenu appears.
- Turn the jog dial to select the "Microphone Limit" menu item.
- Press the jog dial to call up the "Microphone Limit" menu item.

Changing and storing settings



- Turn the jog dial to adjust settings in the "Microphone Limit" menu item.
- Press the jog dial.
  Your setting is stored. You are back to the operating menu.

Canceling an entry

- Press the ESC key.
  The operating menu or the next higher menu level appears.

Or:

- Press the standard display key.
  The standard display appears.

To subsequently directly return to the last edited menu item:

- Press the jog dial repeatedly until the last edited menu item appears.

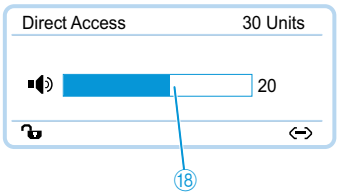
Exiting the operating menu

- Press the standard display key.
  The standard display appears.

Or:

- Press the ESC key repeatedly until the standard display appears.

Setting the volume of the conference units' built-in loudspeakers



You can set the volume of the conference units' built-in loudspeakers via the jog dial on the central unit. The standard display displays the current volume setting ⑱.

CAUTION

Danger of hearing damage due to loud hissing!

When the floor channel volume is set to a high level or when several participants speak simultaneously, feedback (loud hissing noise) can occur. This can cause hearing damage.

- Reduce the floor channel volume (see below).
- Activate the "Feedback Suppression" function to be able to increase the volume before feedback can occur (see page 17).
- Make sure that the "Audio Gain Reduction" function is activated (see page 17). This function reduces the gain per active microphone by the selected level and thus prevents feedback noise.
- Increase the distance between the individual conference units to at least 50 cm.

- Turn the jog dial
  - to the right to increase the volume or
  - to the left to reduce the volume.

Use the "Feedback Suppression" function to be able to increase the floor channel volume by up to 5 dB without feedback occurring (see page 17).

Cleaning and maintaining the conference system

CAUTION

Liquids can damage the product!

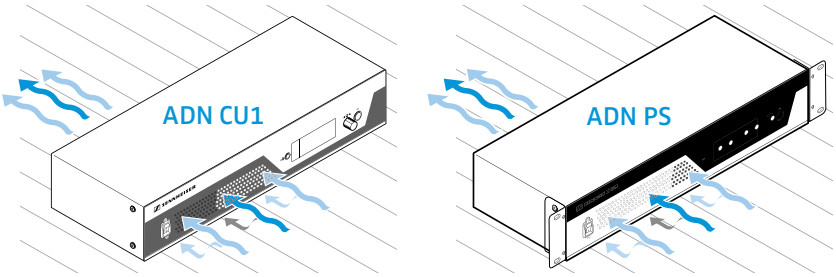
Liquids entering the product can cause a short-circuit in the electronics or damage the mechanics.
Solvents or cleansing agents can damage the surfaces of the product.

- Keep all liquids away from the product.
- Do not use any solvents or cleansing agents.

- Switch the conference system off (see page 14).
- Before cleaning, disconnect the ADN CU1 central unit and the ADN PS power supplies from the mains power supply.
- Only use a dry and soft cloth to clean the product.

To ensure optimum cooling of the ADN CU1 central unit and the ADN PS power supplies:

- Clean the air vents on the front, back and bottom from time to time with a soft brush or paintbrush in order to avoid dust deposits.



Specifications ADN CU1

Dimensions	417 x 100 x 345 mm (W x H x D)
Weight	approx. 6.5 kg
Nominal input voltage	100 to 240 V~
Mains frequency	50 to 60 Hz
Power consumption	245 W
Output voltage at RJ45 EtherCAT	52.8 V ⎓
Nominal output current	max. 1.75 A
Temperature range	operation: +5°C to +50°C storage: –25°C to +70°C
Relative humidity	operation: 10 to 80% storage: 10 to 90%

XLR IN

Input resistance	R_{IN} > 10 KΩ
Input level	max +18 dBu min –18 dBu
Nominal level	+7.5 dBu

XLR OUT

Output resistance	R_{OUT} < 100 Ω
Frequency response	20 Hz to 14.5 kHz; –3 dB
Output level	max. +11 dBu
Nominal level	+6 dBu
DHT (at 1 kHz)	< 0.02% A-weighted at +7.5 dBu
Signal-to-noise ratio	> 80 dB A-weighted at +11 dBu

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